

Raman spectra analysis

Background

Extracting information from the fermentation broth is one of the main problems in modelling fermentation processes. The group has a fermentation rig equipped with Raman spectrometers with a probe small enough that it can be inserted into the broth.

The price one pays for the reduced size is reduced quality on the measurement.

Description

We are interested in exploring different alternatives to improve the quality by means of data processing. The common techniques are based on principal component analysis. We are currently looking into using AI techniques as an alternative. We also have the ability to do wavelet analysis, which provides an alternative means to generate derivatives of the signals, a method that is also used by other researchers.

Supervision

Supervisor : Heinz A Preisig

Daily contact : ditto

Reserved